

REMARKS

Claims 1-15 are currently pending. Claims 1, 5, 8, and 12 are independent claims. In this amendment, no claims have been canceled, amended, or added. Reconsideration and allowance is respectfully requested in view of these remarks.

Applicant notes that the Examiner has not objected to, nor accepted, the drawings filed on March 18, 2004. Absent such an indication, Applicant assumes the drawings have been accepted. However, an indication of such is requested.

Argument

Claims 1- 15 have been rejected under 35 U.S.C. § 102(b) as allegedly unpatentable over Wical (U.S. Patent No. 6,038,560). For at least the reasons set forth below, Applicant respectfully traverses, and requests withdrawal of, these rejections of independent claims 1, 5, 8, and 12 and dependent claims 2-4, 6-7, 9-11, and 13-15 under 35 U.S.C. § 102(b).

Wical discloses a knowledge base search and retrieval system.¹ The knowledge base contains a content processing system 110 that analyzes thematic, contextual, and stylistic aspects of documents 130 and generates a document theme vector 160 for each document.² The document theme vector 160 identifies which themes relate to each individual document 130.³ Individual themes are classified into a hierarchical structure.⁴ Documents 130 are classified into one or more themes.⁵ When a user performs a query, the content processing system 110 identifies which themes relate to the search terms, and returns a list identifying the documents 130 related to the theme of the search, categorized into themes.⁶ Wical does not teach or suggest numerous elements of Applicants' claims as discussed in further detail below.

¹ Wical, Abstract; Column 5, lines 42-56.

² Wical, Column 5, lines 42-56.

³ Wical, Column 5, lines 42-56.

⁴ Wical, Figure 8A-8C.

⁵ Wical, Column 5, lines 42-56.

⁶ Wical, Figures 10A-12;

A. Independent Claims

Independent claim 1 recites:

*[a] method of obtaining search results, comprising:
 parsing statements from at least one Semantic Web
 structured resource to identify component words;
 constructing an index from said component words, said
 index relating said component words to said statements;
 comparing said component words to a search term to
 identify matching words;
 identifying related ones of said statements for said
 matching words based on said index;
 obtaining predicates, instances, types of said instances,
 and literal values of said related ones of said statements; and
 summarizing said predicates, instances, types, and
 literal values for presentation to a user as said search results.*

Recitations in each of independent claims 5, 8, and 12 are similar to recitations of claim 1 discussed herein below. Accordingly, claim 1 is discussed herein as a representative claim.

1. “[P]arsing statements from at least one Semantic Web structured resource to identify component words”

In claim 1, “component words” are identified in “statements” parsed from “structured resources,” i.e., a *single* structured resource may contain *multiple* statements, and a *single* statement may contain *multiple* component words. Claim 1 therefore requires a *first* one-to-many relationship between a structured resource and its associated statements, and a *second* one-to-many relationship between a single statement and its associated component words associated with a given statement.

Wical, in contrast, discloses creating a single theme vector for each document, which stores the theme vector storing the thematic, contextual, and stylistic aspects of the document.⁷ While Wical discloses that each document may be classified into one or more themes (which are indicated in the theme vector), Wical does not teach or suggest that single themes can be further broken down into “component word” equivalent elements. Wical at most only discloses a relationship between single documents and one or more themes. Wical

⁷ Wical, column 5, lines 41-58.

does not teach or suggest a relationship between the disclosed themes and anything analogous to “component words.”

To further explain the differences between Applicants’ claims and Wical, on page 6 of the Office Action, the Examiner cites to Wical, stating that “Wical teaches a content processing system, which analyzes documents to provide thematic profiles and classification of the document,” and that Wical further teaches “[a] theme parser and grammatical parser.” As an example, the Examiner recites that “Wical’s teachings includes the inference processing [sic] 145 which parses the document with a restaurant review column and adds the theme/term restaurant to the document theme vector 160.”

However, while Wical may disclose that documents are parsed to extract themes, Wical does not teach “parsing statements from at least one Semantic Web structured resource to identify component words.” As set forth above, parsing a document for the purpose of extracting a theme is distinguishable from “parsing statements from at least one Semantic Web structured resource to identify component words,” because the parsing performed in Wical does not include first parsing statements from documents, and thereafter identifying component words. Instead, Wical only parses documents to extract themes in a single step. That is, Wical does not specifically parse statements within the documents prior to identifying component words.

Furthermore, as set forth in Applicants’ paper dated January 3, 2007, Wical contains no teaching or suggestion that documents must be “structured resources,” much less “Semantic Web structured resource[s],” and in fact teaches against this recitation in claim 1. Wical discloses “a content processing system [that] processes a plurality of documents to identify themes for a document, and classifies the documents, including themes identified for the documents, and categories of [a] knowledge base.”⁸ However, while Wical can process structured documents and unstructured documents, Wical does not teach processing *Semantic Web Structured resources*. Furthermore, if Wical processed Semantic Web Structured resources, or included “statements from at least one Semantic Web structured resource,” then Wical would not need to analyze “the semantic, contextual, and stylistic aspects” of

Wical, Column 2, lines 63-67.

documents, i.e., parsing for grammar, because of the inherent structure of Semantic Web resources. Conversely, Wical's analysis of "the semantic, contextual, and stylistic aspects" of documents would have suggested to one of ordinary skill in the art that Semantic Web structured resources were unnecessary.

On page 6 of the Office Action, the Examiner cited to Wical, stating that "the documents may be articles, books, periodicals etc." However, this very selection of potential resources establishes that Wical does not require the use of structured documents to extract theme information. Instead, Wical teaches accepting data from various resources regardless of structure and extracting theme information regardless of the presence, or lack, of any structure.

Accordingly, claim 1 is patentable over Wical at least because Wical fails to teach or suggest "parsing statements from at least one Semantic Web structured resource to identify component words." Dependent claims 2-4 are patentable at least by reason of their dependence from claim 1. Claims 5, 8, and 12 and the claims depending therefrom are similarly patentable.

2. "[C]onstructing an index from said component words, said index relating said component words to said statements"

Wical does not teach or suggest an "index relating said component words to said statements," as recited in claim 1. Wical discloses, at most, storing a theme vector associating each document with multiple themes derived from the general contents of the associated document.⁹ However, Wical does not at all suggest subdividing documents into statements, or subdividing themes into component words, and thereafter indexing the component words and statements. That is, unlike Wical, which teaches connecting vectors to documents, claim 1 requires indexing the component words to statements, not the documents. Therefore, Wical fails to read on the "statements" recited in claim 1.

Further, Wical's theme vector is not analogous to the "component words" of claim 1 because each theme vector is unique to each document.¹⁰ That is, Wical only creates one

⁹ Wical, Column 5, lines 42-56; Column 6, line 62-Column 7, line 2; Column 7, lines 42-57.

¹⁰ Wical, Column 5, lines 42-56; Column 6, line 62-Column 7, line 2; Column 7, lines 42-57.

document theme vector per document. Claim 1, in contrast, recites an “index relating said component words to said statements.”

Accordingly, claim 1 is further patentable over Wical at least because Wical fails to teach or suggest “constructing an index from said component words, said index relating said component words to said statements.” Dependent claims 2-4 are patentable at least by reason of their dependence from claim 1. Claims 5, 8, and 12 and the claims depending therefrom are similarly patentable.

3. “[O]btaining predicates, instances, types of said instances, and literal values of said related ones of said statements; and summarizing said predicates, instances, types, and literal values for presentation to a user as said search results”

Wical fails to teach “obtaining predicates, instances, types of said instances, and literal values of said related ones of said statements” as recited in claim 1. On page 7 of the Office Action, the Examiner provides an example of what the Examiner evidently believes are the types and predicates disclosed by Wical. However, this example fails for two reasons. First, Examiner only identifies types and predicates, and fails to identify where Wical recites “*instances ... and literal values of said related ones of said statements.*” Second, the Examiner has completely failed to distinguish the difference between the “instances, types of said instances, and literal values of said related ones of said statements,” “component words,” and “statements” recited in Applicant’s claims. Essentially, when rejecting “component words,” the Examiner compares “component words” to themes, and when rejecting “predicates” the Examiner compares “predicates” to themes, etc. Thus, the Examiner has not identified all of the recitations of claim 1 within the Wical reference, but is instead improperly asserting that the same theme element disclosed in Wical reads on various different recitations in Applicant’s claims.

Furthermore, even if Wical’s theme elements did read on all of “instances, types of said instances, and literal values of said related ones of said statements,” “component words,” and “statements” recited in Applicant’s claims, Wical still would not teach or suggest “summarizing said predicates, instances, types, and literal values for presentation to a user as said search results,” as recited in claim 1. Instead, Wical provides the user with a hierarchy

of the search results, sorted based on themes, which are generally associated with each document.¹¹ This distinction shows the fundamental difference between common document analysis, as disclosed in Wical, and analysis of Semantic Web resources recited in Applicant's claims.

Accordingly, claim 1 is further patentable over Wical at least because Wical fails to teach or suggest "[o]btaining predicates, instances, types of said instances, and literal values of said related ones of said statements; and summarizing said predicates, instances, types, and literal values for presentation to a user as said search results." Dependent claims 2-4 are patentable at least by reason of their dependence from claim 1. Claims 5, 8, and 12 and the claims depending therefrom are similarly patentable.

B. Claim 3: "[G]athering statements from said identified Semantic Web structured resources to obtain gathered statements; presenting said gathered statements for parsing of said gathered statements"

Claim 3 depends from claim 1 and recites "gathering statements from said identified Semantic Web structured resources ... [and] ... presenting said gathered statements for parsing." In claim 3, gathered statements are parsed; the claim does not recite parsing structured resources directly. Wical, in contrast, does not parse and index *the individual statements* in documents 130. Instead, Wical discloses processing each document 130 in its entirety, and assigning each document 130 a single theme vector 160.¹²

Furthermore, Wical does not teach "gathering statements from said identified Semantic Web structured resources," particularly because Wical does not disclose "identifying" Semantic Web structured resources. On page 7 of the Office Action, the Examiner states that Wical teaches a "search and retrieval system which includes documents such as document 130, the documents may be articles, books, periodicals, etc." However, this statement fails to identify Semantic Web structured documents. Indeed, while Wical can extract resources from various document types, Wical fails to specifically identify Semantic Web resources much less gathering statements from such resources.

Wical therefore fails to teach or suggest various features of independent claim 3.

¹¹ Wical, Figures 10-12; Column 25, line 34-Column 26, line 12;

¹² Wical, Column 5, lines 42-56; Column 6, line 62-Column 7, line 2; Column 7, lines 42-57.

CONCLUSION

All rejections have been addressed. In view of the above, the presently pending claims are believed to be in condition for allowance. Accordingly, reconsideration and allowance are respectfully requested and the Examiner is respectfully requested to pass this application to issue. It is believed that any fees associated with the filing of this paper are identified in an accompanying transmittal. However, if any additional fees are required, they may be charged to Deposit Account 18-0013, under order number 65632-0218. To the extent necessary, a petition for extension of time under 37 C.F.R. 1.136(a) is hereby made, the fee for which should be charged against the aforementioned account.

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Respectfully submitted,

Electronic signature: /Charles A. Bieneman/
Charles A. Bieneman

Registration No.: 51,472

RADER, FISHMAN & GRAUER PLLC

Correspondence Customer Number: 25537

Attorney for Applicant